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1. PURPOSE

1.1. The purpose of this procedure is to set instructions in the proper use and handling of the Fisher Scientific Isotemp GDP10 Water Bath.

2. SCOPE

2.1. This procedure applies to the HPV Serology Laboratory located at the Advanced Technology Research Facility, Room C2007.

3. REFERENCES

3.1. Fisher Scientific Isotemp GDP10 Water Bath user manual

3.2. HSL_EQ_010.01: Water Bath Use and Maintenance Form

3.3. HSL_GL_001: Waste Disposal at the Advanced Technology Research Facility

3.4. HSL_GL_002: Equipment Qualification and Calibration in the HPV Serology Laboratory

3.5. HSL_GL_003: Good Documentation Practices for the HPV Serology Laboratory

3.6. HSL_GL_007: Reagent and Chemical Expiry in the HPV Serology Laboratory

3.7. HSL_GL_008: Laboratory Flow and Gowning Procedures for the HPV Serology Laboratory

3.8. HSL_GL_009: HPV Serology Laboratory BSL-2 Procedures

3.9. HSL_GL_010: Control and Request of Documents in the HPV Serology Laboratory

4. RESPONSIBILITIES

4.1. The Research Associate, hereafter referred as analyst, is responsible for reviewing and following this procedure.

4.2. The Scientific Manager or designee is responsible for training personnel in this procedure and reviewing associated documentation.

4.3. The Quality Assurance Specialist is responsible for quality oversight and approval of this procedure.

5. REAGENTS, CHEMICALS AND EQUIPMENT

5.1. Isotemp GDP10 Water Bath (Model # FSGPD10)

5.2. Cavicide (Warehouse, Cat # 79300360)

5.3. Ster-ahol (VWR, Cat # 14003-358 or equivalent)

5.4. Wypalls paper towel (Warehouse, Cat # 79300335 or equivalent)

5.5. Clear Bath (VWR, Cat # 54847-540 or equivalent)

5.6. PCC-54 Detergent Concentrate (ThermoFisher Scientific, Cat # PI72288 or equivalent)

5.7. NIST Calibrated Thermometer (VWR, Cat # 89095-640 or equivalent)

6. HEALTH AND SAFETY CONSIDERATIONS

6.1. Proper safety precautions should be taken while working in a laboratory setting. This includes, but is not limited to, proper protective equipment such as lab coats, safety glasses, closed-toe shoes, and non-latex gloves.

6.2. Refer to the respective SDS when working with any chemicals.

6.3. Refer to "HSL_GL_001: Waste Disposal at the Advanced Technology Research Facility" regarding waste disposal processes at the ATRF.

7. DEFINITIONS

Term	Definition
ATRF	Advanced Technology Research Facility
HPV	Human Papillomavirus
HSL	HPV Serology Laboratory
SDS	Safety Data Sheets
SOP	Standard Operating Procedure
Type II water	Pure/Analytical Grade, used for standard applications

8. OPERATION

8.1. Filling the unit:

Note: If the water bath has been used previously, the tank should be thoroughly cleaned before refilling. Follow the cleaning procedure in the maintenance section of this SOP.

8.1.1. Fill the water bath with Type II water so that the liquid level is at least 1½ inches from the bottom of the tank.

8.1.2. If a thermometer is used, use the clip provided to hold the thermometer to the side of the water bath. Slide the O-ring on the thermometer to position the thermometer to the proper depth.

8.1.3. When closing the cover, place the thermometer along the front edge. A notch along the front of the cover clears the thermometer and clip with the cover closed.

8.1.4. For optimum results, the same fluid level should be maintained throughout the operating procedure.

Note: Algaecide, such as Clear Bath, may be added to reduce algae formation. Follow the instructions supplied with the algaecide and make entry on HSL_EQ_010.01: Water Bath Use and Maintenance Form.

8.2. Powering the unit

8.2.1. Set the power switch to the ON position. The unit will go through a power-on self-test that will take several seconds. During this time the display will show the unit's capacity in liters.

8.2.2. When the unit has completed its self-test, it will maintain the water bath at the last set-point temperature. The Heat indicator will light when the unit is applying heat to the water bath. This indicator will cycle on and off during normal operation.

8.2.3. When the display shows normal operation after completing the self-test, continue by setting the temperature set-point and backup temperature.

8.2.4. If the display shows any message after completing the self-test, do not use the unit. Refer to the Troubleshooting section of the manual to determine cause.

8.3. Setting the temperature units to °C

Note: Note which indicator is lit to the left of the display, either F for Fahrenheit or C for Centigrade. If the desired indicator is lit, omit this procedure.

8.3.1. Press Menu button so display shows _C_F. Press and hold the Set while simultaneously pressing the Increase (∧) or Decrease (∨) button until the display shows the desired temperature units, C for Centigrade or F for Fahrenheit.

Note: Desired temperature unit is °C.

8.3.2. Release all controls. Within a few seconds, the display will return to normal operation. The desired indicator (C) should be lit to the left of the display.

8.4. Setting the temperature set-point

8.4.1. To change the set-point, press Increase (∧) or Decrease (∨) button. The display shows the temperature set-point as you change it. Release the Set button when you have achieved the desired setting. The display will return to normal operation within a few seconds, displaying the actual temperature.

8.4.2. To check the set-point without affecting normal operation, press the Set button at any time.

9. MAINTENANCE

9.1. Quarterly Cleaning

9.1.1. Turn off power, unplug the unit, and allow to cool completely.

9.1.2. Use the internal drain system (hose and connector) to empty the unit into the sink.

9.1.3. Spray the inside of the water bath with Cavicide and let it sit for at least 3 minutes prior to being wiped with a clean low-lint wipe.

9.1.4. Spray the inside of the water bath with Ster-ahol and wipe with a clean low-lint wipe.

9.1.5. The unit is ready to be filled with Type II water and if desired, Algaecide per manufacturer's instructions.

9.1.6. Document maintenance performed on HSL_EQ_010.01: Water Bath Use and Maintenance Form.

Note: In instances where heavy residues are observed inside the tank, clean the inside of the water bath with mild detergent and warm water prior to step 9.1.3.

9.2. Biannual Maintenance

9.2.1. Calibrating the unit to NIST-approved Thermometer:

9.2.1.1. Turn the unit on and set the temperature.

9.2.1.2. After allowing sufficient time for the temperature to stabilize, compare the thermometer reading to the actual temperature displayed on the unit. If the displayed temperature does not agree with the thermometer, calibration must be performed.

9.2.1.3. Note the difference between the displayed temperature and the thermometer.

For example: If the displayed temperature is 37 and the thermometer reads 36, the difference is -1, meaning that the display should read 1 lower than it now shows.

9.2.1.4. Press Menu button until display shows CAL.

9.2.1.5. Press and hold the Set button while simultaneously pressing the Increase (∧) or Decrease (∨) button to set the desired temperature offset. Release the Set button when you have achieved the desired setting. The display will return to normal operation within a few seconds, displaying the actual temperature.

In the example above, you would set the display to read -1.

Note: The temperature offset can be set up to a range of 5.5°C or 10.0°F.

9.2.1.6. Document calibration performed on HSL_EQ_010.01: Water Bath Use and Maintenance Form.

9.3. Record Temperature

9.3.1. Using the NIST calibrated thermometer clipped to the water bath, record the temperature of the water bath to a single decimal place prior to use on HSL_EQ_010.01: Water Bath Use and Maintenance Form, when timed activities are performed. Include data references as applicable.

Note: Multiple entries are not required during a single task execution or when time/temperature is not a critical step.

10. ATTACHMENTS

10.1. Not applicable.

11. REVISION HISTORY

Date Changed	Version #	Changes	Reasons
14Mar17	New	Create new SOP for the use and maintenance of the fisher scientific Isotemp GDP10 water bath	Currently no SOP.

Equipment ID:	Calibration Date:	Calibration Due Date:

Date	Initials	Disinfectant(s) Used/ Lot Number	Temp (°C)	Activity Performed
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:
		☐ N/A ☐ Cavicide, Lot #: ☐ Ster-ahol, Lot #: ☐ Algaecide, Lot #:		☐ Use: ☐ Other:

Comments:

☐ N/A

Review By/Date:	
QA Review By/ Date:	